
ENVIRONMENTAL CONSEQUENCES

4.1 NO ACTION ALTERNATIVE

Under this alternative, SDG&E would not construct or operate the proposed facilities for interconnecting the OMGP to the SDG&E grid and the 510 MW natural gas fired power plant. Under the No Action Alternative, Presidential Permit 68 would not be amended by DOE, and the existing Miguel-Tijuana line would not be modified/reconductored.

The benefits from the proposed project, as summarized in Section 1.3 (Purpose and Need), would not be realized. Potential impacts related to the project, whether short or long term, direct or indirect, project specific or cumulative, adverse or beneficial, would not occur.

If the proposed project is not built, the OMGP would not be able to interconnect to the SDG&E grid via the Miguel-Tijuana line and the Miguel substation. Overall, there would be a loss of economic benefits associated with the project, including: 1) its contribution to a safe and reliable energy supply; 2) purchase of equipment and materials; 3) construction costs, labor costs; 4) local infrastructure improvements; and 5) local tax revenues.

Construction, operation, and maintenance of the proposed switchyard, short transmission interconnection, and the reconductored Miguel-Tijuana line is not expected to result in any unavoidable adverse significant impacts. With implementation of the Applicant-committed design and mitigation measures, the interconnection project is expected to result in only minor impacts on the environment. Under the No Action Alternative, the residual project impacts discussed herein would not occur. Since the Miguel-Tijuana line and associated access roads already exist, project environmental impacts will be limited almost entirely to the short construction phase when workers and equipment are present. Due to the nature of reconductoring activities, construction impacts will be short term and transient as the work progresses along the existing transmission corridor.

4.2 PROPOSED ACTION

The Applicant's proposed action consists of the following primary project components: Otay Mesa 230 kV switchyard; short (0.1 mile) transmission interconnection which includes additional incorporation of two new lattice structures into the Miguel-Tijuana line east of the switchyard, reconductoring of approximately 9.05 miles of the existing Miguel-Tijuana 230 kV transmission line up to the Miguel substation, and construction and operation of a 510 MW combined cycle power plant run on natural gas.

The Applicant's proposed action also includes implementation of the environmental protection measures outlined in Appendix A of the EA.

The impact analysis is presented in two subsections for both construction and operational impacts. The impacts of the power line include an evaluation of the 0.1-mile-long interconnection between the existing Miguel-Tijuana 230 kV power line and a new 230 kV switchyard, and addition of new conductors along a 9.05-mile-long section of the existing line. Impacts associated with construction and operation of these facilities are presented under the subheading "transmission line." A subsection, "power plant" addresses impacts of constructing and operating the 510 MW natural gas-fired power plant. Impacts are presented as appropriate under these two subheading in each technical area.

The analysis of impacts of constructing and operating the 510 MW power plant are presented in summary form and are based on information presented in the California Energy Commission's *Decision on the Application for Certification, Otay Mesa Generating Project*, Docket No. 99-AFC-5 (California Energy Commission, April 2001). The final project details may differ slightly for the non-transmission portion of the project if the CEC License is amended.

4.2.1 Construction Impacts

4.2.1.1 Air Quality

Transmission Line. Potential sources of air emissions during construction will be heavy equipment and windblown dust from disturbed areas at the plant switchyard site and, to a lesser extent, the transmission interconnection and reconductoring areas.

To mitigate potentially adverse impacts during construction, the Applicant will require personnel to properly maintain vehicle and equipment engines to control exhaust emissions. Daily water applications on active construction surfaces or other equivalent dust suppression measures will be employed during construction hours to minimize fugitive PM₁₀ and PM_{2.5} emissions. No significant impacts on ambient air quality are expected due to the proposed project.

Power Plant. The California Energy Commission (CEC) Decision on the certification of the 510 MW Otay Mesa Generating Plant (April 2001) located in the East Otay Mesa region of San Diego County, approximately 15 miles southeast of downtown San Diego evaluated the impacts to air quality from the operation of this plant. The evaluation considered the impacts of direct emissions of six criteria air pollutants, and of the precursors of ozone [nitrogen oxides (NO_x) and VOC], and the precursors of PM₁₀ [NO_x, VOC, and sulfur oxides (SO_x)]. The San Diego area is a non-attainment area for the federal and state 1-hour ozone standards and the state PM₁₀ standard.

The CEC reviewed compliance of the proposed plant with the San Diego County Air Pollution District rules as well as California Environmental Quality Act (CEQA) requirements on the basis of air pollution modeling performed by Applicant. It concluded that plant operations could contribute to higher ozone and PM₁₀ levels in the region. To limit these impacts, the plant will be equipped either SCONOX or Selective Catalytic Reduction (SCR) to meet U.S. EPA's Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) criteria. NO_x will be limited to 2 ppm and CO to 6 ppm over a 3-hour rolling average, while VOC is limited to 2 ppm over a 1-hour average. In addition, the Air District limits ammonia emissions from the SRC system to 10 ppm (ammonia is an agent used to reduce NO_x).

In addition, emission reduction credits (ERCs), otherwise known as offsets, for NO_x were required of the Applicant to further limit ozone impacts from the plant. Three types of offsets were obtained: purchase of NO_x offsets from the Air District market, purchase of VOC offsets for NO_x at a ratio of 2.4 to 1, and the novel use of mobile emissions reduction credits (MERCs) as NO_x offsets. The MERCs derive from the conversion of marine vessels to low-emitting diesel engines and the conversion of a fleet of diesel refuse trucks to natural gas engines. A total of 125 tons per year of NO_x and NO_x equivalents were achieved by applying these three types of offsets.

Similarly, to mitigate possible contributions to existing violations of the state PM₁₀ standards and in accordance with the CEQA, the Applicant agreed to pay a mitigation fee of \$1.2 million to the Air District. These funds would go to programs in the project vicinity to retrofit school buses to reduce emissions of PM₁₀ precursors.

The CEC concluded in its Decision that the Applicant has secured all required offsets to fully mitigate the project in accordance with the Air District's rules on new source review. It further noted that the Air District has issued a Prevention of Significant Deterioration (PSD) permit for the plant. Finally, it concluded that the implementation of the 76 in total Conditions of Certification listed in the Decision would ensure that the Otay Mesa Generating Plant would not result in any direct, indirect, or cumulative significant impacts to air quality.

4.2.1.2 Geology, Soils, and Seismicity

Transmission Line. Construction of the proposed project will require grading and associated soil disturbance at the Otay Mesa switchyard and, to a lesser extent, at the two tower foundation areas where the existing Miguel-Tijuana line will be tied into. Additionally, some minor vegetation clearing and/or trampling may be needed at several pull sites along the transmission line in order to allow safe and efficient equipment use and movement. Equipment movement along the transmission corridor, including work at tower bases and movement along

access roads, will also cause minor soil disturbance and compaction. The total acreage of temporary disturbance for the project is less than 20 acres.

With implementation of the Applicant-proposed environmental protection measures, no adverse impacts are expected. The project will minimize the potential for soil erosion through use of appropriate erosion control measures (refer to Section 4.2.1.3 and Appendix A). The transmission line construction (0.1 mile) and reconductoring (9.05 miles) will not require construction or grading of new access roads. Thus, no impacts due to induced landslides are expected. Grading operations and drainage control at the switchyard will be done in accordance with County of San Diego requirements developed for the overall Otay Mesa Generating Plant site which encompasses the 230 kV switchyard. The proposed project will not adversely impact any known mineral/resource deposits or extraction operations in the study area.

The switchyard and new towers (at interconnection point) design will conform to the Uniform Building Code and California Building Code seismic zone factor for the site of 0.4, to protect against the effects of earthquake shaking. Reconductoring of the Miguel-Tijuana 230 kV line will not reduce its ability to withstand seismic shaking.

In summary, construction of the proposed project is not expected to adversely impact geologic resources or soils, and the geologic hazards present in the study area do not pose an unacceptable risk to project facilities.

Power Plant. The 46-acre OMGP site comprises a 29-acre area dominated by Diablo Clays with slopes ranging from 2 to 9%, and a 17-acre area of primarily Huerhuero loam with 9 to 15% slopes. Construction of the OMGP, linear facilities, and access roads will disturb an estimated 75 acres of land, while roughly 36 acres will be disturbed from plant operation. Vegetation will be removed and topsoil will be stockpiled during construction. The plant site will be finished to a mild grade of 0.5% slope to assist drainage. According to the CEC's Decision on plant certification, constructed drainage facilities, including detention ponds, will comply with local and county design guidelines.

The placement of impervious surfaces associated with the plant would tend to enhance soil erosion from storm water runoff. The Applicant for plant certification has submitted a draft Erosion Control and Storm Water Management Plan, which identifies erosion and storm water runoff control measures. The final plan will include a discussion of best management practices. The CEC concluded in its decision that if the plant met the six Conditions of Certification and received the required permits from local, state, and federal agencies, the plant would not create significant soil and water erosion impacts.

4.2.1.3 Water Resources/Floodplains

Transmission Line. Construction disturbance will include approximately 5 acres of land for the switchyard in the northeast corner of the 46-acre plant site for the Otay Mesa Generating Plant. The proposed interconnection and reconductoring activities will disturb an estimated 14 acres during the construction phase. Construction disturbance at sites along the 230 kV transmission line (Route 1) will be limited to small, 20,000 square-foot areas surrounding the 230 kV towers and at pull sites. Surface disturbance in these areas will be minor and consist primarily of vegetation trampling and possibly limited vegetation removal. The project will minimize the potential for accelerated erosion/sediment transport through the use of appropriate erosion control measures that include the short-term use of sandbags, matting, mulch, berms, hay bales, or similar devices along all disturbed areas. No significant impacts on water quality resulting from sediment transport or erosion are expected.

As shown on Figure 3.3-1, the Miguel-Tijuana line crosses several 100-year floodplains as identified by the Federal Emergency Management Agency (FEMA). The floodplain areas are: Otay River Valley (approximately MP 2.5); Salt Creek (approximately MP 3.5); and Telegraph Canyon (approximately MP 6.6). No new project related structures will be constructed in the 100-year floodplain areas and the existing Miguel-Tijuana line spans the drainage areas associated with the 100-year floodplains. The project will not involve construction in any smaller floodplains either. Additionally, the proposed interconnection project will not directly impact any jurisdictional wetland areas.

In summary, no significant impacts on water resources, or floodplains will occur.

Power Plant. The OMGP will use an estimated 385 acre-feet per year of process water for steam generation and domestic uses. The use of air-cooled condensers for heat rejection greatly reduces process water requirements compared to similar plants that use water cooling. The Otay Water District (OWD) estimates that plant requirements represent an insignificant increase in demand (about 1%) on water supplies. OWD connects to the San Diego Water Authority, which purchases water from the Metropolitan Water District of Southern California (MWD). Colorado River water represents about 70%, and the California Aqueduct system about 30%, of MWD supplies. While recycled water is not yet available to the plant, a dual plumbing system will be installed to accept recycled water in the event it becomes available in the future.

Wastewater from the OMGP will flow to the Point Loma Wastewater Treatment Plant via an existing sewer main. The estimated daily and maximum flows from OMGP represent no more than 0.1% of the volume currently treated at Point Loma. The city of San Diego has indicated that OMGP wastewater characteristics are within acceptable limits. Other requirements of the plant operator related to wastewater include the preparation of a Storm Water Pollution Prevention Plan and obtaining an Industrial User Wastewater Discharge

Permit. Meeting these requirements and the conditions listed in the CEC's Decision on certification of the plant ensures the protection of water resources.

4.2.1.4 Vegetation

Transmission Line. Construction of the proposed plant switchyard will require limited clearing of vegetation, grading, and implementation of drainage and landscaping plans. It is estimated that construction of the overall project will disturb less than 20 acres of soil, vegetation, and topography. The vegetation types to be impacted along the transmission line are listed in Table 3.4-1, by milepost. Approximately 5 acres of non-native grassland will be permanently removed when the Otay switchyard is cleared, graded, and compacted with appropriate fill material. The switchyard area is not covered by the NCCP but it is covered by the Biological Resources Mitigation and Implementation Plan (BRMIMP) prepared for the Otay Mesa Generating Project (URS, 2000). A summary of pertinent BRMIMP measures is included in Appendix A of this EA.

Impacts on vegetation and sensitive habitat that may occur along the existing 230 kV Miguel-Tijuana transmission line due to bundling operations (i.e., reconductoring including addition of 6 new conductors to existing towers) will be restricted to areas around the transmission towers and at pull sites. Access to these areas will be via existing unvegetated roads. Impacts have been calculated assuming that temporary disturbance will occur during the bundling operation, and at pull and tension sites. Much of this area at each tower is already disturbed by the access roads and work areas for each tower. The existing barren access road approaches at each tower are used for maintenance and cleaning of conductors.

Project-related impacts will be temporary in nature and habitats will be allowed to regenerate once construction is completed. The impacts will be intermittently distributed over the line from tower to tower and at the six pull sites; therefore, the magnitude of the impact at each site will be very low relative to the surrounding habitat. No adverse impacts on biological resources are expected to occur at other areas along the transmission line corridor (e.g., between existing tower locations), because there will not be any disturbance in these areas. Therefore, these short-duration construction activities are not expected to disrupt sensitive habitats.

Some construction activity will occur near several sensitive plant species, based upon the assumed impact footprints. Plant species in the impact zones include 5 areas of San Diego barrel cactus, 3 areas of ashy spike-moss, 1 area of Coulter's matilija poppy (*Romneya coulteri*), and 5 areas of San Diego County viguiera.

Preconstruction surveys will be performed to determine the presence of sensitive plants, animals or habitats at the proposed disturbance areas. As applicable, disturbance footprints will be modified to avoid direct impacts on sensitive plants and animals. The BRMIMP (see

Summary in Appendix A) includes contingency measures in the event impacts cannot be avoided.

SDG&E's approved NCCP (SDG&E, 1995) covers biological mitigation measures and procedures for SDG&E to follow when maintaining and/or modifying their existing transmission system. SDG&E's NCCP will cover procedures for protecting biological resources along the portion of the existing Miguel-Tijuana line to be reconducted. Additionally, the BRMIMP will cover the switchyard, the 0.1-mile long interconnect, and issues related to Quino checkerspot butterfly and wetlands along the Miguel-Tijuana line to be reconducted. Refer to Appendix A for more information.

Power Plant. The power plant would require clearing of 46 acres of non-native grassland, considered of relatively low value from an ecological standpoint. The right-of-way for the wastewater line would require disturbance of about 11.2 acres of non-native grassland and 0.4 acre of Diegan Coastal Sage Scrub vegetation of greater ecological value than the non-native grassland. The impacts of loss of coastal sage scrub were mitigated by the CEC via requiring monetary compensation for habitat losses associated with the project. The CEC required the Applicant to provide at least 32.9 acres of habitat compensation because of habitat losses associated with construction. The Applicant is required to pay at least \$320,434 to purchase 32.9 acres of habitat from the O'Neal Canyon Land Bank or similar bank acceptable to CEC to compensate for project losses. Impacts to vegetation from losses or disturbance associated with power plant construction compared to similar vegetation existing in the immediate power plant vicinity was considered insignificant.

4.2.1.5 Wildlife

Transmission Line. The plant switchyard site will result in the permanent loss of approximately 5 acres of nonnative grassland. This loss of nonnative grassland is not considered significant by itself or cumulatively with other project impacts because this vegetation type is not considered regionally important as biological habitat and it is not important for wildlife in the region. Portions of the greater Otay Mesa Generating Plant site (i.e., the 46-acre property) and surrounding areas will remain as nonnative grassland and disturbed uses; therefore, the power plant and switchyard will not pose a barrier to wildlife movement from the mountains to the east through Johnson Canyon towards the Otay River Valley. Development on this site is expected to represent an incremental loss of raptor foraging habitat, but should not be limiting to raptor species in the area. Regardless, other areas onsite at the switchyard and in the surrounding area will remain suitable for potential nesting use. No other sensitive biological resources are expected to be impacted by construction of the switchyard site. Preconstruction surveys will be performed to verify biological conditions prior to the initiation of grading activities.

Biological resources are present along the existing 230 kV Miguel-Tijuana transmission line where bundling operations (i.e., reconductoring including addition of 6 new conductors to existing towers) occur. These activities will be restricted to areas around the transmission towers and at pull sites. Access to these areas will be via existing unvegetated roads.

Project-related impacts will be temporary in nature and habitats will be allowed to regenerate once construction is completed. The short-duration construction activities are not expected to be disruptive of wildlife populations in general or to sensitive habitats such as vernal pools. The reconductoring activities have the potential to temporarily impact raptors that perch on the towers. Additionally, raptors are known to build nests on towers. SDG&E will limit impacts on raptors to the extent practical during reconductoring activities along the 230 kV transmission line.

Surveys for Quino checkerspot butterfly were conducted in the spring of 2000 in accordance with U.S. Fish and Wildlife Service protocols. No Quino checkerspot butterflies were found in the applicable potentially suitable habitat areas (i.e., areas with populations of *Plantago erecta*, a host plant species) in the area of potential impact for the transmission line interconnection and reconductoring activities.

Construction will occur in the vicinity of several sensitive species locales, based upon the assumed impact footprints. Two pairs of California gnatcatcher territories are currently within predicted impact zones. Potential impacts to gnatcatchers will be mitigated in accordance with SDG&E's NCCP.

Impacts on wildlife will generally be mitigated in accordance with SDG&E's NCCP and the stipulations of the U.S. Fish and Wildlife Service in the Biological Opinion issued on November 22, 2000. The key findings and conditions of the B.O. are summarized in Appendix A. Overall impacts to wildlife along the transmission line would not be significant.

Power Plant. The CEC Decision requires the Applicant to commit to several mitigation measures for protected species including the Quino checkerspot butterfly, California gnatcatcher, and Otay tar plant (*Hemizonia conjugens*) which are state and federally listed endangered and threatened species known to occur in the project area. The CEC required the Applicant to undertake the following measures to offset or avoid impacts:

- Establish a permanent endowment to maintain about 60 acres of quino checkerspot butterfly habitat located northeast of the power plant site; this requirement was imposed since the CEC was concerned about nitrogen oxides (NO_x) emitted from the power plant settling to the ground with particulates and acting as fertilizers that would stimulate growth of non-native plant species in the impacted area
- Conduct preconstruction surveys for sensitive species

- Biological experts must be present during construction to advise personnel on what to do if sensitive species are encountered; advice will follow Biological Resources Conditions of the Certification identified in the CEC Decision
- Conduct a Worker Environmental Awareness Training Program for all employees to are to participate in prior to construction
- Implement a habitat management strategy for perpetual care of at least 32.9 acres of habitat offsite in the project region to compensate for temporary and permanent impacts to sensitive species from project construction and operation
- Provide to CEC a Biological Resources Mitigation Implementation and Monitoring Plan for review and approval prior to construction
- Provide the CEC Project Manager with a Section 7 Biological Opinion from the U.S. Fish and Wildlife Service in accordance with the federal Endangered Species Act.

The conditions are subject to change via the CEC License Amendment process, as applicable.

The CEC concluded that if these measures are implemented, the impacts to wildlife populations and protected species from power plant construction and operation would be insignificant.

4.2.1.6 Aquatic Ecology/Wetlands

Transmission Line. Construction of the proposed project is not expected to have any impact on aquatic ecology or wetlands related to the plant switchyard or the short (0.1 mile) transmission interconnection.

The portion of the Miguel-Tijuana 230 kV line to be reconductored traverses several ephemeral drainages that include riparian, aquatic, and/or wetland habitat. The project is not expected to require any disturbance to these areas since the existing Miguel-Tijuana 230 kV typically spans these drainages and access roads already exist over the length of the line.

One potential impact area is the Otay River Valley, which is considered to be sensitive habitat for various wildlife species. An existing Miguel-Tijuana 230 kV transmission tower is located in the 100-year floodplain for the Otay River (see Figure 3.3-1). The Applicant will take special precautions and care related to any reconductoring activities in the Otay River Valley in order to avoid impacts to sensitive habitat (aquatic, riparian, and/or wetlands). For example, pull sites located in this area have been carefully sited in upland, disturbed areas to avoid waters of the United States and associated sensitive habitats. Other environmental

protection measures are summarized in Appendix A. No adverse project impacts on aquatic, riparian, or wetland habitats are expected to occur.

Power Plant. No impacts to aquatic habitats or wetlands are anticipated from power plant construction activities.

4.2.1.7 Land Use and Recreation

Transmission Line.

Land Use. Construction of the proposed switchyard, short transmission interconnection, and reconductoring of the Miguel-Tijuana 230 kV line are not expected to result in any significant adverse impacts on surrounding land use.

Construction activities will be undertaken to minimize interference with the surrounding land uses. Once grading of the plant switchyard site commences, development of the site itself will disturb approximately 5 acres of undeveloped land. The plant switchyard will be compatible with existing and proposed uses in the project area and is located in an area designated for industrial development. Construction activities will create noise, dust and emissions from grading equipment and other construction vehicles at the switchyard site, short 0.1-mile interconnect, and along the 9.05 miles of the Miguel-Tijuana line to be reconductored. Although short-term construction-related land use impacts are anticipated, they are not expected to be significant. Overall, the impact of construction activities will be insignificant due to compatibility with existing land uses and the temporary construction period. Due to the temporary and transient nature of the transmission reconductoring activities, no significant impacts on sensitive land uses are anticipated.

Route 1 (refer to Figure 2-2) proceeds northeasterly from the power plant site approximately 0.1 mile and then continues in a northwesterly direction along the existing SDG&E 230 kV easement. Land uses at and around the plant site, including the short 0.1-mile long interconnect, are designated for industrial development. Land uses along the existing 230 kV line include government, residential, industrial, commercial, and education. Project-related improvements, however, will occur almost entirely within the right of way of the existing 230 kV line, and thus will create no new incompatibilities with surrounding land uses.

All of the plans, policies, and regulations reviewed recognize the existing SDG&E 230 kV easement as a permanent easement for transmission of electricity. No change in the location or size of the easement is contemplated. Therefore, a bundled 230 kV transmission line is consistent with existing land use plans, policies, and regulations, including locations where the easement transverses sensitive land uses.

Recreation. The proposed interconnection project will not traverse any established recreation resource areas and no impacts on recreation are expected.

As discussed in Section 4.2.1.6 (Aquatic Ecology/Wetlands), the Applicant will ensure that special precautions are undertaken in the Otay River Valley to protect sensitive resources including those that have value to the proposed Otay River Valley Regional Park. Visual impacts on recreational resources are discussed in Section 4.2.1.8.

Power Plant. The CEC analysis of land use impacts of the power plant focused on evaluating if the project was: 1) consistent with local land use plans, ordinances, and policies; and 2) was compatible with existing and planned uses. Most of the power plant site is on fallow agricultural land covered with non-native vegetation.

The CEC staff determined that the project is consistent with: the San Diego General Plan; the Otay Subregional Plan; the Sweetwater Community Plan; the East Otay Mesa Specific Plan; the East Otay Mesa Site Planning and Design Guidelines; and the Craft Comprehensive Land Use Plan for Brown Field.

Seven Conditions of Certification for land use set by the CEC include the following:

- Setback distances of structures of >199 feet from the northern plant boundary
- Specific height requirements of 65 feet above finished grade for the heat recovery steam generators, heat recovery steam generator stacks >131 feet above grade, generation buildings limited to 70 feet above grade, and air-cooled condensers limited to 76 feet above grade,
- Project owner shall provide 34 onsite parking spaces
- All fences and walls must be constructed to a height of 8 feet above final grade
- All signs must comply with local guidelines
- Make specified changes to wastewater discharge pipeline plans provided in the Applicant's application,
- The project owner will obtain approval of a Tentative Parcel Map from the San Diego County Department of Planning and Land Use and record the appropriate parcel map for the three lots shown in a March 2000 Supplement to the Application for Certification.

The conditions are subject to change via the CEC License Amendment process, as applicable.

The CEC concluded that the presence of the power plant would not contribute to adjacent development of land that would cause further agricultural land conversion. The conclusion was that the power plant project would not create any significant direct, indirect, or cumulative adverse land use impacts in the local area. No significant impacts to recreation in the project area are expected because of power plant construction.

4.2.1.8 Visual Resources

Transmission Line.

230 kV Switchyard and Short Transmission Interconnection. The moderately sensitive views that would be affected by the Otay Mesa switchyard and the short (0.1 mile) transmission interconnection (and adjacent power plant) have been identified as several residences along Otay Mesa Road and near Alta Road. The planned power plant would generally screen views of the switchyard from the west. Additionally, the eastern extremity of a trail corridor planned for Johnson Canyon would also be affected and is a highly sensitive view.

It should be noted that the County of San Diego has previously approved substantial commercial and industrial development as part of the General Plan buildout of East Otay Mesa (refer to 1994 East Otay Mesa Specific Plan). Additionally, several major commercial/industrial developments are planned to be constructed in the near future which will begin to alter the natural character of the East Otay Mesa area in accordance with approved plans.

The switchyard construction would contribute to a perceptible lessening in visual quality relative to views specifically focused to the south across the switchyard site (and adjacent power plant). These views include those from the proposed Johnson Canyon trail corridor which is north of the switchyard (and adjacent power plant). The switchyard and power plant would noticeably lessen the quality of a limited range of views, but the quality of a sequence of interrelated views available in the vicinity of the site has already been significantly impacted. Giving consideration to the context, hikers should not experience a perceptible reduction in visual quality due to the switchyard (and adjacent power plant) when hiking along the segment of trail due north of the site.

The 230 kV switchyard will be painted with neutral, earth tone and gray colors and will be landscaped to comply with the design guidelines in the County of San Diego, East Otay Mesa Specific Plan (County of San Diego County, 1994). Additionally, any lighting will be shielded to limit potential nighttime light and glare.

Miguel-Tijuana 230 kV Line. The existing 230 kV transmission line is a regional utility that is industrial in appearance. In the context of rural/agricultural and urban residential land uses through which it passes, it is incongruous, is not similar in appearance to features inherent to the landscapes within the potentially affected views, and draws attention.

Visual Impacts: Viewing Positions 6 and 7. Reconductoring of the entire transmission line route will be completed within three to four months, and grasslands disturbed around pull sites should become substantially reestablished in one growing season. Therefore, the visual impacts of construction equipment and activity, as well as the visual impact caused by disturbing grasslands, will be temporary and not significant due to their short duration.

Concerning the visual impact of the proposed 230 kV bundled transmission line once it is completed, Figures 3.8-2b and 3.8-3b are photo-simulations of the proposed 230 kV bundled transmission line where it crosses Otay Lakes Road and Eastlake Drive, respectively. Both represent the most critical views from the several major road crossings (roads which have been designated as scenic highways), as well as the most critical views from existing residential areas potentially affected by the bundled line. These photo-simulations should be compared to the existing visual conditions shown in the companion images.

The visual impact of bundling the lines would be minimal. No modifications of the tower structure will be done. Six sets of double lines will replace the single lines in place today and the six existing conductor-insulator connections will be replaced with yoke plates to keep the lines separated. The existing transmission lines are noticeable and distracting, particularly where the homes are elevated above the base of the tower and close to the lines. Bundling the conductors will make the lines only slightly more noticeable (Figures 3.8-2b and 3.8-3b) and would not noticeably lessen visual quality.

The existing transmission line which may be reconducted crosses the Johnson Canyon and O'Neal Canyon trail corridors that are part of the proposed Otay River Valley Regional Park plan. The bundled line would not impair visual quality for either trail. For views from either trail, doubling the number of conductors technically may adversely affect views, but the difference would not be noticed as a perceptible lessening of visual quality. The visual impact would be below the threshold of significance and insignificant.

In summary, no significant visual impacts would result from implementation of the proposed interconnection project.

Power Plant. The CEC staff's analysis of visual impacts from the power plant addressed concerns about visibility of plant structures at sensitive viewing locations, the reflection of sunlight from facility surfaces (e.g., stacks and fences), and the potential for exterior power plant lighting to change the nighttime visual character of the vicinity from rural to industrial by creating glare and backscatter to the nighttime sky. The Applicant conducted an analysis of visual impacts from seven key offsite observation points of the power plant. Visual impacts were determined to be insignificant at each observation point based on photographs with the photosimulations of the plant.

The CEC required the Applicant to implement several measures to eliminate potential visual impacts of the power plant. These included using earth tone tan or gray colors to blend existing facilities with soils and vegetation in the plant vicinity, using fencing that does not have reflective materials, and specific landscaping to blend the facility with the landscape.

The visual impacts of constructing the power plant may be temporary for certain activities such as construction of the wastewater and potable water pipelines but no significant permanent visual impacts are expected if the conditions specified by the CEC Decision are implemented.

4.2.1.9 Cultural and Paleontological Resources

Transmission Line.

Cultural Resources. Under the implementing regulations of Section 106 of the National Historic Preservation Act (36 CFR 800), impacts to identified cultural resources need be considered only if the resource is a "Historic Property"; that is, only if it meets the criteria of eligibility for the National Register of Historic Places (36 CFR 60.4).

This project is also being evaluated in accordance with the California Environmental Quality Act (CEQA). Under NEPA, a project potentially would have significant impacts if it would adversely affect a historic property. Likewise, under CEQA Appendix G, a project potentially would have significant impacts if it would cause substantial adverse change in the significance of an historical resource (i.e., a cultural resource eligible to the CRHR, or archaeological resource defined as a unique archaeological resource which does not meet CRHR criteria), or would disturb human remains. A non-unique archaeological or paleontological resource need be given no further consideration, other than the simple recording of its existence by the lead agency.

In many cases, determination of a resource's eligibility to the NRHP or CRHR (or its uniqueness) can be made only through extensive research, archaeological testing, and other costly and time consuming methods. Where possible, resources will be avoided. If, as the project proceeds, it proves impossible to avoid cultural resources on a selected project

component, formal eligibility evaluation will be undertaken. If the resource meets the criteria of eligibility to the NRHP, CRHR or is a unique archaeological resource, it will be formally addressed under Section 106 procedures as set forth under 36 CFR 800 and/or Section 21084.1 of California PRC and Sections 15064.5 and 15126.4 of the CEQA Guidelines. Resources that are not formally evaluated will be treated as eligible: all mitigation measures pertaining to the avoidance of direct and indirect impacts will apply.

230 kV Switchyard. The cultural resources field survey (Gallegos & Associates, 1999) did not identify any archaeological sites within the footprint of the proposed switchyard. Sites CA-SDI-7215 and 10297 were relocated within the adjacent power plant site property. Site CA-SDI-10298 is located east of the switchyard. A cultural resources testing program has been completed on these three sites (Gallegos & Associates, October 2000).

CA-SDI-10298 has been found to be a surface scatter only and is recommended as not significant under National Register and California Register criteria. CA-SDI-7215 is also a surface scatter only and is likewise recommended as not significant under National Register and California Register criteria. CA-SDI-10297 does contain a subsurface component and appears to retain those qualities that would make it eligible to the National Register of Historic Places under criterion D. However, CA-SDI-10297 is located south of a southwest trending drainage, which bisects the southeast corner of the plant site. There will be no ground-disturbing activity associated with the construction or operation of the generating facility and it is thus concluded there will be no project-related effects to this site.

Transmission Line Route. Route 1 includes the 0.1 mile connection from the plant switchyard to the existing Miguel-Tijuana 230 kV transmission line and 9.05 miles of reconductoring along the existing Miguel-Tijuana 230 kV transmission line north to the Miguel substation. The potential for new impacts associated with implementation of Route 1 are principally limited to the approximately 0.1 mile long interconnection from the plant site to the existing line. With the exception of the short interconnection from the switchyard to the existing Miguel-Tijuana 230 kV transmission line (including the new towers to be constructed at the intersection point with the Miguel-Tijuana line), there will be no new construction of facilities associated with this route other than rebundling or reconductoring at existing tower locations. There is a limited potential for new surface disturbance to occur from activities at the existing tower locations where there will be activities associated with reconductoring. Minor disturbances will also occur at the pull sites along the existing transmission line route.

Previous surveys associated with the construction of the 230 kV line and subsequent surveys for other activities identified a total of 20 sites within or immediately adjacent to the corridor. Sites associated with construction of the Miguel-Tijuana 230 kV line

have been previously cleared with respect to the Section 106 compliance process. There is a slight potential for additional new impacts to occur if new components of these sites are exposed and disturbed by the proposed reconductoring activities or construction of the 0.1-mile tie-in. Five sites identified at or near the reconductoring pull site locations or the 0.1-mile tie-in and associated tower locations have the potential to be adversely affected if not properly evaluated for site significance pursuant to National Register and California Register criteria and if found to be significant subject to appropriate mitigation measures such as data recovery. The site testing program completed in 2000 (Gallegos & Associates, October 2000) resulted in the conclusion that each of the potentially affected sites was not significant (CA-SDI-10297 does appear to contain a significant component, but that component does not occur within the APE of the project components discussed herein). Specifically, archaeological sites CA- CA-SDI-7212, -12909, -14225, and --0298, which each partially overlap a pull site location, were tested and found to be insignificant lithic scatters. The 0.1-mile transmission line tie-in also overlaps CA-SDI-10298. A portion of CA-SDI-10297 that appeared to extend near a portion of a pull site footprint was also tested. This site is described as a habitation site. That portion of CA-SD-10297 potentially affected by the proposed project was recommended as not significant based on the results of the comprehensive testing program undertaken at that site, which revealed that a portion of the site is an insignificant lithic scatter only (Gallegos & Associates, October 2000).

No significant impacts on cultural resources are expected associated with reconductoring of the existing Miguel-Tijuana 230 kV line.

Paleontological Resources. Project related excavation activities have the potential to unearth and impact paleontological resources. With implementation of the Applicant proposed environmental protection measures in Section 2.2.3 and Appendix A, no significant impacts on paleontological resources are anticipated.

230 kV Switchyard. Plant switchyard construction will require grading and excavation or subsurface intrusions to a maximum depth of approximately 15 feet. It is assumed that construction of the switchyard has the potential to disturb underlying rock formations within the entire switchyard site footprint.

The approximate 5-acre switchyard site and surrounding area appear to lie within a high sensitivity formation. Cut-and-fill activities may disturb and destroy material within the potentially sensitive formation. Increased pedestrian and vehicular traffic in the area during construction will potentially expose any resources that may be present to the threat of casual damage, vandalism, and illicit collection. With implementation of the Applicant-proposed environmental protection measures (see Section 2.2.3), no significant impacts on paleontological resources are expected.

Transmission Line Route. Route 1 will use existing towers that will be “bundled” (i.e., additional conductors added to existing towers). The only new construction would be the short, 0.1-mile tie-in from the plant site to the existing transmission line corridor. No impacts to sensitive paleontological resources are expected to occur along the 0.1-mile long interconnect, which will span from the switchyard to the new towers to be installed in the Miguel-Tijuana line. The most sensitive part of Route 1 occurs north of Otay Valley where numerous significant fossil localities have been discovered. Activity associated with bundling at individual towers could result in some minor surface disturbance and subsequent paleontological impacts. Areas required for staging equipment and/or materials are currently expected to be within the proposed Otay Mesa Generating Plant boundary and the existing Miguel substation property (i.e., no additional disturbances/impacts are expected). Activity associated with bundling (e.g., conductor payout and tensioning activities) at the pull site locations could result in some minor surface disturbance and subsequent paleontological impacts. Existing access roads requiring maintenance could also result in surface disturbance and subsequent paleontological impacts. In summary, with mitigation, no significant impacts are expected to occur.

Power Plant.

Cultural Resources. The Applicant conducted a records search and literature review within a 1-mile radius of the power plant. Field surveys of the plant site were conducted and linear corridors for the project. A total of 257 recorded historic and prehistoric sites and 52 isolates were identified. A total of 3 previously recorded sites were identified within the power plant site area. The CEC staff and the Applicant agreed that one of these sites is a significant cultural resource and recommended avoidance of the site during plant construction. Ten sites were identified along two potential routes for the wastewater discharge pipeline, one of which was considered significant and warrants data recovery and monitoring.

Several conditions were required of the project owner to mitigate impacts of construction on prehistoric and historic sites in the project area. These include:

- A trained cultural resources specialist must be present during site construction,
- The project owner shall provide detailed footprint maps and designs for facilities at the plant as well as other areas planned for disturbance to the CEC and Cultural Resources Specialist before site preparation activities and construction begins,
- The project owner will prepare a Cultural Resources Monitoring and Mitigation Plan that identifies specific measures to minimize potential impacts to sensitive cultural resources. The plan shall be submitted prior to any vegetation clearing or earth-disturbing activities,

- An employee training program on cultural resources will be implemented prior to construction,
- Cultural resources specialists and their delegated monitors will have the right to stop construction if any unknown cultural resource is recognized during site preparation or construction activity,
- The cultural resources specialist will keep a daily log of any resource finds and maintain a progress report on status of monitoring, collections, mitigation, etc.,
- The project owner will submit reports on recovered cultural resources data to the State Historic Preservation Officer in California and the appropriate regional archaeological information center, and
- Interaction with Native American Tribal representatives to develop finalized agreements for Native Americans to participate in monitoring site activities during earth-moving work.

Paleontological Resources. No *in-situ* paleontological sites were found during the course of the Applicant's field surveys. Two conditions were required by the CEC Decision to protect paleontological resources in the event they would be unearthed during plant construction. As was the case for cultural resources the CEC requires that adequate protection measures be in place prior to site construction. These include development of a Paleontological Monitoring and Mitigation Plan and having a qualified paleontologist onsite during construction .

No impacts of power plant construction on paleontological resources are expected. In the unlikely event that sites are encountered, appropriate mitigation measures have been developed to protect any sites that may be encountered.

4.2.1.10 Socioeconomics

Transmission Line. Construction of the proposed interconnection project is expected to require 10-20 workers and occur over a 3-4 month period. It is anticipated that SDG&E personnel will construct the interconnection project (including the switchyard, short 0.1-mile interconnect, and reconductoring activities), and that non-local workers will not be required. The proposed project is not anticipated to adversely impact socioeconomic conditions in the project area, since the project is not expected to require an influx of workers and will not make demands for housing or schools. The project will contribute to the local economy through purchase of goods and services, payment of taxes, and by providing needed electrical power to the San Diego grid.

Power Plant. Construction of the OMGP is expected to last approximately 21 months and require a maximum of 361 workers during peak construction. Operation of the plant is expected to provide 25 permanent jobs. The project owner has an existing agreement with the San Diego County Building and Construction Trades Council to supply both the construction and operations workforce. Due to the large number of union members already living in San Diego county, this additional demand is expected to have minimal impacts on the local housing market from relocations, and minimal impacts on local schools, utilities and services. The project is expected to generate a construction payroll of \$25 million and an operations payroll of \$3 million per year, while providing \$2.7 annually in property taxes to the county. Equipment and material costs of \$160 initially and \$8 million annually will add \$12 million in sales tax revenues to the area. A condition of the CEC's certification decision is that the operator must recruit workers and buy materials and equipment from within San Diego County before hiring or buying from outside the county. The CEC found that construction and operation of the OMGP would not result in any direct, indirect, or cumulative adverse socioeconomic impacts.

Environmental Justice.

Transmission Line. Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations" requires all federal agencies to develop environmental justice strategies. Pursuant to the directive, the USEPA issued Guidelines that require all federal and state agencies receiving federal funds to develop strategies to address this issue. The federal guidelines include a two-step screening process to determine if a project could result in disproportionate impacts on low-income and minority populations. The first step is to check whether the potentially affected community or area includes minority and low-income populations; and if it does contain these population groups, to determine whether the environmental impacts fall disproportionately on minority and low-income members of the community.

The proposed project is located in SRA 22 (South Bay) which is a portion of San Diego County where the non-white population (minorities) constitutes about 74 percent of the total population. The current percentage for the non-white population in the entire San Diego County area is 39 percent. Adjacent SRAs also have high concentrations (51 to 60%) of minority populations. In addition to high concentrations of minority populations, all three SRAs have median incomes that are much lower than the average for the County as a whole. Therefore, the project could potentially affect low-income and minority populations because these are present in the project area in relatively larger numbers.

In the context of the siting of a power plant/switchyard, the primary environmental justice issue would be potential air or water emissions that could adversely affect the health of these populations. Other issues could be any potential residential or business displacements, visual impacts, and EMF or noise (e.g., corona) impacts on populations near the power plant

switchyard or transmission lines. Neither the proposed interconnector project or the OMGP would result in significant air emissions of criteria pollutants that could lead to health effects in the U.S. or Mexico. It would also not result in significant emissions of toxic air contaminants that could increase the ambient cancer risk or result in non-cancer health effects or involve wastewater discharges that could affect drinking water supplies. Due to mitigation measures included in the project design and/or the absence of sensitive receptors nearby, there would be no significant noise impacts, as discussed in 4.2.1.11, or EMF impacts due to the project. The project would not displace any homes or businesses. Additionally, the proposed project would not result in significant visual resource impacts. In light of this, it is concluded that the project would not result in disproportionate impacts on low-income and minority populations present in the area around the power plant switchyard or transmission facilities.

Power Plant. Census data indicates that a minority/low income population exists within a 6-mile radius of the OMGP site as determined by U.S. EPA guidelines. The CEC and plant operator concur, however, that the project as mitigated would not result in adverse impacts to the environment or to public health and safety and, therefore, the project would not expose minority or low-income populations to disproportionate impacts. Locations that might be impacted by increases in PM₁₀ concentrations lie to the east of the plant site in unpopulated areas as indicated by air pollution modeling.

4.2.1.11 Transportation and Noise

Transportation

Transmission Line. As discussed in Section 3.11.1, access to the proposed switchyard within the OMGP site is via State Route 905, Otay Mesa Road, and Alta Road. Other local roads that may be utilized for access include Airway Road and Sanyo Drive. The existing Miguel-Tijuana 230 kV line to be reconductored has existing roads and trails over its entire length. The construction workforce, equipment, and material requirements are minor, and the construction phase is short. Construction related impacts on local and regional roads within the project area are expected to be short term and insignificant.

Power Plant. Construction of the OMGP will similarly impact traffic on State Route 905, Otay Mesa Road, and Alta Road, as well as other local roads. A worst-case analysis of construction traffic indicates that several intersections along Otay Mesa Road could be adversely affected during construction. The CEC's Certification Decision for the project indicates that the Applicant submitted a Supplemental Traffic Study in November 2000 that commits the Applicant to improve four intersections near the project site to mitigate these impacts. The improvements will alleviate the need to stagger construction hours to prevent overloading these intersections. An estimated 4,220 truck deliveries that will be required during the 21-month construction period would not be expected to cause adverse traffic

impacts. Conditions of project certification ensure that road construction associated with the plant will not cause undue impacts on traffic. Commuter and truck traffic during plant operation are not expected to have any adverse impacts on local traffic conditions due to the small number of vehicle trips required.

Noise.

Transmission Line. Construction activities at the switchyard include site clearing and preparation, foundation construction, and electrical equipment erection. Switchyard construction activities will occur simultaneously within construction of the adjacent OMGP. Construction noise levels from the OMGP, including the switchyard, are anticipated to range up to 90 dBA Leq at 50 feet from the source (e.g., air compressors). The anticipated resulting sound level at the nearest residence will be 49 dBA or less (Otay Mesa Generating Company, 1999).

Construction activities will be scheduled during daytime periods, as practical. Construction noise is expected to be inaudible or only faintly audible at the nearest residences, and no significant noise impacts are anticipated associated with switchyard construction.

No construction noise impacts are anticipated associated with construction of the short, 0.1-mile interconnect between the Otay Mesa switchyard and the existing Miguel-Tijuana 230 kV transmission line due to the minor activities involved and the remote location. Reconductoring activities along the existing Miguel-Tijuana line will result in short term, transient noise along the right of way. Some construction activities may be briefly audible at residences along the northern portion of the route near pull site locations (e.g., near Telegraph Canyon Road). No significant construction noise impacts are anticipated.

Power Plant. Construction of the OMGP and linear facilities would cause temporary and transitory noise impacts. Noise levels at the nearest sensitive receptor from activities such as steam blows to flush piping prior to start-up will range from 46 to 49 dBA. Silencers or new quieter steam blow processes will be used to reduce noise impacts. A noise control program will be implemented to protect construction workers. Limiting construction to daytime hours and providing notice to nearby receptors, as appropriate, will further mitigate noise impacts.

4.2.2 Operational Impacts

4.2.2.1 Corona

Transmission Line. The electric field at the surface of the conductors (transmission lines) causes the phenomenon of corona. Corona is the electrical breakdown or ionization of air in very strong electric fields and, depending upon weather conditions, it is the source of audible noise, electromagnetic interference, and visible light.

The corona performance of the proposed project was predicted using the Corona and Field Effects Program developed by the Bonneville Power Administration (BPA). Corona performance is calculated using empirical equations that have been developed over several years from the results of measurements on numerous high-voltage lines. Of the methods available for predicting radio interference levels, the BPA empirical equivalent method agrees most closely with long-term data. Important input parameters to the computer program are voltage, current, conductor size, and geometric configuration on the line. Because corona is a statistical phenomenon, corona computations are made under conditions of average operating voltage and for average line height (40 feet). The resulting maximum conductor surface voltage gradient is 13.09 kV/cm for the new 230 kV conductors strung on the existing steel towers. Because corona is basically a foul-weather phenomenon, levels of audible noise, radio interference, and television interference are predicted for both fair and foul weather.

Because this project adds a second conductor per phase to the existing 230 kV transmission line, it effectively increases the conductor diameter, enhances corona performance, and thus reduces audible noise and radio and television interference.

SDG&E will operate the modified 230 kV system in accordance with their standard procedures for limiting audible noise and radio interference.

Audible Noise.

Transmission Line. Audible noise associated with operation of a transmission line is a crackling or buzzing sound caused by corona discharge near the conductors and insulators. The intensity of the noise level is dependent on weather conditions, voltage, and conductor configuration. Because of the large conductors that will be used on the proposed line, corona activity will be minimal during both fair and foul weather. Predicted levels of corona-generated audible noise are at, or below, ambient noise levels for all weather conditions.

In summary, the predicted maximum audible noise (during foul weather) at the edge of the 230 kV right of way, after the proposed reconductoring is complete, is 35.3 dBA. The existing line produces 45.1 dBA of audible noise. These levels are comparable with quiet conditions in a suburban residence at night and much less than the EPA guidelines of 55 dBA for the annual average day-night level outdoors (EPA, 1978).

Power Plant. Operation of the OMGP will emit a steady, continuous, noise day and night. Noise mitigation measures incorporated into the project design will ensure that noise levels at the nearest sensitive receptor will not exceed 39 dBA, which is 5 dBA

above the ambient noise level in the area. The design will blend noise levels and muffle equipment to limit noise impacts to nearby residential receptors to acceptable levels.

Radio and Television Interferences.

Transmission Line. Radio interference (RI) from transmission lines is primarily caused by corona. The level of corona activity on the proposed line will be minimal because of the use of two relatively large conductors on each phase of the 230 kV Miguel-Tijuana line. Consequently, the level of corona-generated radio interference anywhere off of the right of way will be at or below recommended levels. The radio interference predicted for fair weather conditions at the edge of the 230 kV right of way is 28.1 dBUV/m. This level is much less than the 40 dBUV/m level, which had been identified as acceptable (IEEE Committee Report, 1971). For reference, the existing interference level for fair weather conditions at the edge of the 230 kV right of way is 40.2 dBUV/m.

A second source of RI, gap-type sparking, is not a frequent source of interference on high-voltage lines and is generally not a factor for 230 kV transmission line designs. Spark-gap noise is avoided by proper design and installation of transmission line hardware parts. Individual locations of spark gap noise, including those from nearby objects, can be readily located and corrected.

Dirt on the insulators may cause micro-arcing in foggy weather and thus be an isolated source of RI. However, it is less significant than either corona or spark-gap interference and will not be of concern for the proposed line. Micro-arcing is avoided by increasing the insulation in high contamination areas and washing insulator strings periodically.

In general, for 230 kV transmission lines, radio interference is not a problem in fair weather conditions. During foul weather conditions, the quality of some AM radio broadcast stations with weak signals may be reduced in isolated locations, especially on the right of way. There should be no effect on FM radio reception.

Transmission line related sources of television interference (TVI) are caused by corona and gap-type noise. Corona discharge from the transmission line conductors can be a source of TVI, typically on the video portion only, and especially on lines with voltages of 345 kV or greater. Because of the 230 kV operating voltage and the low levels of corona anticipated for the proposed line, corona-generated TVI is not anticipated to be a problem for this line.

Interference with radio reception primarily occurs at AM broadcast frequencies (535 to 1,605 kHz) while television interference affects reception between 54 and 88 MHz (Channels 2 to 6). There is the potential for interference to mobile communications

operating very near the right of way, particularly for CB receivers (27 MHz) and FM mobile receivers operating at VHF (25 to 88 MHz) frequencies. Because corona activity is greater during foul weather, such interference would be infrequent given the low incidence of foul weather in the vicinity of the plant. Interference with cellular telephone operation due to corona-generation interference should not be a problem because these telephones operate at much higher frequencies (900 MHz). SDG&E will operate the modified 230 kV transmission facilities (230 kV) and SDG&E's facilities are required to comply with Federal Communications Commission (FCC) rules and regulations that make operators of unintentional radio frequency sources responsible for taking steps to mitigate any resulting interference (FCC, 1988). SDG&E's policy in resolving AM radio and television interference complaints is to make every reasonable effort to promptly locate and correct the cause of the interference when it has been established that this interference is from its project. Where appropriate, corona-generated interference can often be corrected by improvements to the landowner's antenna.

In cases where signal blockage or reflection is reported, a signal survey will be taken on the complainant's property and surrounding area to determine whether or not blocking or reflections are caused by the proposed changes to the existing power line. If the line is the cause, corrective measures will be taken including changing the antenna location or upgrading of antenna performance.

To provide a basis for evaluating and correcting any interference caused by the transmission line, radio and TV field strength measurements will be made on the affected SDG&E lines prior to construction. If complaints are received within 0.5 mile after operation of the line, and it is determined that the cause is attributable to the new construction or operation, SDG&E will take corrective mitigation measures to provide satisfactory service.

4.2.2.2 Electric and Magnetic Fields

Electric power lines, generators, transformers (e.g., step-up transformers at switchyard), and other devices that handle electric currents produce electric and magnetic fields (electromagnetic fields, or EMFs). For this project, the potential for public exposure to project related EMF is limited to the immediate vicinity of the transmission line right of way. EMFs oscillate at a frequency of 60 hertz (i.e., 60 cycles per second). The strength of the EMF generated by an alternating current varies with voltage, wire type, spacing, and location, and other factors. Field strength decreases rapidly with distance from the source. EMFs are produced by power lines, house wiring, all electrical appliances, and wherever electrical currents are flowing. A controversy exists as to whether there are any health effects from exposure to EMFs. Experiments have shown that magnetic fields can cause biological effects in living cells, but it is not known whether these biological effects have any relevance

to human health. To address these questions, the CPUC undertook an investigation in 1991, working with the California Department of Health Services (DHS), electric utilities, and a “consensus group” made up of experts and consumers vitally interested in this subject. Due to the lack of scientific or medical conclusions about potential health effects from electric utility facilities and power lines, the CPUC adopted interim measures in 1993 that help to address public concern on this subject, including the deployment of no/low cost steps to reduce EMF levels in new or upgraded facilities, residential and workplace EMF measurement programs available to utility customers, and an education and research program managed by DHS. Pending clear scientific direction regarding possible harm from utility facilities, the CPUC has pursued a policy of avoiding any unnecessary new exposure that can be avoided at a reasonable cost. The CPUC authorized utilities to implement no and low-cost field-reduction measures on new and upgraded facilities. Low-cost is defined by the CPUC as approximately 4% of the project cost. The CPUC has determined that precautionary field-reduction measures costing much more than 4% of the project cost cannot be justified given the dearth of scientific evidence of a causal relationship between electrical facilities and health risks. Given the absence of a scientific demonstration that EMF causes health effects, any potential impact would be entirely speculative and, therefore, cannot be considered significant.

In October 1996 the National Research Council of the National Academy of Sciences published the results of its evaluation of the research on health effects attributable to EMF. The Committee conducting the study examined more than 500 studies conducted over the last 17 years and released its findings in a report titled, “Possible Health Effects of Exposure to Residential Electric and Magnetic Fields.” Dr. Charles Stevens, chairman of the committee concluded that the findings to date do not support claims that electromagnetic fields are harmful to a person’s health (NRC, 1996). He continues, “Research has not shown in any convincing way that electromagnetic fields common in homes can cause health problems, and extensive laboratory tests have not shown that EMFs can damage the cell in a way that is harmful to human health.”

On June 27, 1998, a 28-member advisory panel sponsored by the National Institute of Environmental Health Sciences (NIEHS), part of the National Institutes of Health, voted 19 to 9 to label EMF’s a “possible human carcinogen,” which kept open funding for continuing government studies. On May 4, 1999, NIEHS issued a report entitled *Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields* (NIEHS, 1999). The report concludes: “The NIEHS believes that the probability that EMF exposure is truly a health hazard is currently small. The weak epidemiological associations and lack of any laboratory support for these associations provide only marginal scientific support that exposure to this agent is causing any degree of harm.” Although the NIEHS concluded “that ELF-EMF exposure cannot be recognized as entirely safe” with regard to leukemia, it found the scientific evidence of a leukemia risk to be “weak.”

The Applicant will follow its guidelines for no/low-cost field-reduction, as approved by the California Public Utilities Commission (CPUC), in developing the facility and related transmission lines, as applicable. The CPUC defines low-cost as approximately 4 % of the project cost. The CPUC has determined that precautionary field-reduction measures costing more than approximately 4% of the project cost cannot be justified given the paucity of scientific evidence linking EMF with health risks. SDG&E will also comply with DOE stipulations in Presidential Permit No. 68, as amended, regarding this matter.

4.2.2.3 Induced Currents and Hazardous/Nuisance Shocks

Introduction. The double circuit transmission line will contain six phases with two conductors per phase (a total of 12 conductors). Each conductor will be 900 kcmil size, type ACSS, Aluminum Association code word “Canary.”

Possible human exposure effects associated with the interaction of electric fields from transmission lines, on and near a right of way, fall into two categories: perceived short-term effects that may represent a nuisance, and possible long-term health effects. Only short-term effects are discussed here.

Electric Fields: Short-Term Effects. Since the proposed project will not materially change the electric fields on the right of way, the following discussion also applies to the existing SDG&E facilities.

Short-term effects from transmission line electric fields are associated with perception of induced currents and voltages or perception of the field. Induced current or spark discharge shocks can be experienced under certain conditions when a person contacts metallic objects in an electric field. Such effects can often occur in the fields associated with transmission lines that have voltages of 230 kV or higher.

Primary shocks are those that can result in direct physiological harm. Such shocks are not possible from induced currents associated with the proposed line.

Secondary shocks are defined as those that could cause an involuntary and potentially harmful movement, but no direct physiological harm. Secondary shocks could be produced by the existing 230 kV line. However, such occurrences are very infrequent and when they do occur, are most likely to be barely perceptible. Induced currents can be mitigated via grounding of objects and such currents are very unlikely to be perceived outside the right of way.

Transmission lines can, under some conditions, induce currents on railroad signal communication conductors. This is not an issue for this project since no operating railroad track parallels any part of the project.

Grounding mitigates the secondary effects for stationary objects like fences and buildings. Unlike fences or buildings, mobile objects such as vehicles and farm machinery cannot be grounded permanently. The National Electrical Safety Code (ANSI C2-1997) requires that, for lines with voltages exceeding 98 kV line-to-ground (170 kV line-to-line), sufficient conductor clearance be maintained to limit the induced short-circuit current in the largest anticipated vehicle under the line to 5 milliamperes (mA) or less. For example, with a maximum electric field of 4 kV/m under the conductors, the induced current even for a triple trailer truck 13.5 feet high, 8.5 feet wide, and 77 feet long (not permitted on California highways), would be less than 4.0 mA, well within the 5mA criterion. This has been accomplished by maintaining a conductor ground clearance of 30 feet not only where large vehicles could be present but elsewhere as well.

SDG&E designs and operates 230 kV lines to be in compliance with the NESC and applicable California state codes, and this project would not alter this design.

Magnetic Field: Short-Term Effects. Magnetic fields associated with transmission and distribution systems can induce voltage and current in long conducting objects, such as fences, that are parallel to the transmission line. As with electric field induction, these induced voltages and currents are a potential source of shocks. Magnetic fields are caused by the current in the conductor.

Magnetically induced currents from power lines have been investigated for many years, and calculation methods and mitigating measures are available. The study of gas pipelines near transmission lines has led to prediction methods and mitigation techniques specifically for induced voltages on pipelines. Similar techniques and procedures are available for irrigation pipes and fences. Grounding policies employed by utilities for long fences reduce the potential magnitude of induced voltage. Because this project will increase line current, the grounding of fences on the right of way will be accomplished as part of the construction phase in accordance with SDG&E practice, including applicable codes and regulations.

Cardiac Pacemakers. The final short-term electrical field consideration is possible interference with cardiac pacemakers. The magnetic fields even directly under the transmission line are too weak to interfere with most pacemaker designs.

There are two general types of pacemakers; asynchronous and synchronous. The asynchronous pacemaker pulses at a predetermined rate. It is practically immune to interference since it has no sensing circuitry and is not exceptionally complex. The synchronous pacemaker only pulses when its sensing circuitry determines pacing is necessary. In pacemakers with specific electrode configurations, interference may result from the transmission line electric field causing a spurious signal on the pacemaker's sensing circuitry. When these pacemakers detect a spurious signal such as a 60 Hz sinusoid, they are

programmed to revert to an asynchronous mode of operation. While it is possible for the transmission line electric fields to interfere with the normal operation of some pacemakers, the interference may not be a problem unless exposure is prolonged. Interference from transmission lines is much less likely than for other sources of electrical interference such as microwave ovens and cellular phones (Silberberg, 1993).

Inductive Interference. Because there are no parallel utilities (i.e., telephone, telegraph, railroad or pipeline), no adverse effects from inductive interference is expected. If an unanticipated effect occurs, the project will take all necessary steps to mitigate impacts by working directly with the owner/operator of the utility affected.

4.2.2.4 Wildlife

Transmission Line. Operation of the proposed interconnection project has the potential to adversely impact sensitive wildlife species due to bird collisions with transmission conductors. The proposed project will introduce a new, short (0.1 mile) transmission line between the new 230 kV switchyard (to be installed at the Otay Mesa Generating Plant) and the existing Miguel-Tijuana 230 kV line. The new line will run at approximately a 45° angle where it intersects the existing line. The potential exists for bird strikes on this new line. However, bird collisions have not been a problem in the project area since the Miguel-Tijuana line was built in 1981. SDG&E has installed orange balls along portions of the transmission line. The balls are primarily meant to warn low-flying aircraft (e.g., Sheriff's Department, Border Patrol, etc.), but also function to make the line more visible to birds. The doubling of conductors along the existing Miguel-Tijuana 230 kV line will make the conductors more visible to birds, therefore, the potential for bird collisions is expected to be lowered along the Miguel-Tijuana 230 kV line if the project is implemented. The increased line visibility would be expected to reduce the potential for migratory or other birds to strike the existing line where it crosses the Otay River Valley downstream of Lower Otay Lake.

An extremely low potential for electrocution of large birds (e.g., raptors) exists along the existing Miguel-Tijuana 230 kV line. The proposed reconductoring/bundling of conductors would not increase the potential for electrocution since the added conductors will be the same voltage as the adjacent conductor – i.e., can simultaneously touch the adjacent, bundled conductors without a potential for electric shock. The distance between conductors of different voltage on the Miguel-Tijuana 230 kV line is greater than 12 feet – i.e., minimum raptor wing span of greater than 12 feet needed to have any potential for electrocution. No raptors with such a wide wing span exist in the San Diego area.

In summary, no significant impacts to wildlife are expected to occur during the operational phase for the project.

Power Plant. Operation of the power plant is not expected to have significant impacts on wildlife. The height of the power plant stacks is expected to be below 150 feet. Bird collisions are not expected with structures of this height.

The CEC Decision required that appropriate mitigation measures would be developed for federal and state protected species to provide protection from any emissions of power plant operation.

4.2.2.5 Vegetation

Transmission Line. Operation of the proposed interconnection project would not adversely impact vegetation during the operational phase. A small amount (less than 1 acre) of non-native grassland would be taken out of production over the life of the project at the proposed 230 kV switchyard, and under the two new steel lattice structures to be installed at the interconnection tie-in point on the existing Miguel-Tijuana line. The Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) for the Otay Mesa Generating Project (URS, 2000) provides mitigation and compensation for the plant switchyard.

SDG&E maintains its key, gated access roads along the Miguel-Tijuana line, but the right of way is not actively maintained or disturbed. SDG&E does not clear vegetation along the right of way and no herbicides are utilized. Biological resources along the right of way will continue to be protected by the operational protocols adhered to by SDG&E in accordance with the Subregional and Natural Community Conservation Plan (NCCP) (SDG&E, 1995).

In summary, no significant impacts to vegetation, including wildlife habitat, are expected to result from operation of the proposed interconnection project.

Power Plant. Operation of the power plant is not expected to impact vegetation downwind of the plant. Concentrations of gaseous emissions will be extremely low. The CEC however, has required a vegetation endowment fund be established for 60 acres of native vegetation so that weeding on a regular basis can be used to remove non-native species that may result from nitrogen deposition potentially associated with nitrogen oxide emissions from the power plant.

4.2.2.6 Transportation and Noise

Transportation

230 kV Switchyard. Operation of the switchyard will be coordinated between the operators of the Otay Mesa Generating Plant, SDG&E, and the Cal ISO. Operation of the switchyard will not require any extra full-time employees.

The contemplated expansion of Brown Field Airport would extend the existing runway about 3,500 feet to the east, to a location of about 2.6 miles west of the proposed switchyard site. FAA obstruction standards were reviewed to determine the potential for air safety hazards associated with the proposed runway extension and the height of the switchyard and transmission facilities. Based on the FAA's height and distance methodology, it was determined by the FAA in May 2000 that the project components would not exceed FAA obstruction standards and would not be a hazard to air navigation.

In summary, operation of the switchyard will not: generate substantial vehicular movement; alter present patterns of circulation; alter waterborne, rail, or air traffic; substantially increase traffic hazards to motor vehicles, bicyclists, or pedestrians; violate adopted LOS standards; generate traffic for which affected routes are not suitable; or create demand for new parking that cannot be accommodated by the project design. There are no road features in the project area that would affect public safety. Therefore, the proposed project is not expected to result in significant impacts on the local transportation system.

Transmission Line Route. Potential impacts associated with modification of the existing 230 kV transmission line route include operation-related impacts. Operation-related impacts will result from periodic maintenance of the transmission line during operation of the project. Maintenance requirements for the modified 230 kV transmission line are expected to be the same as for the existing line. Maintenance of the 230 kV transmission line system will result in negligible vehicle travel along access roads to towers, and is therefore unlikely to have any adverse impact on the existing roadways crossed by, or located in the vicinity of, the transmission line towers. Use of helicopters to inspect and periodically wash the line will continue to occur. No significant impacts to traffic and circulation patterns are expected to result from operation of the proposed project.

The proposed tower structures (120 feet tall) to be constructed where the short, 0.1-mile interconnection ties into the existing Miguel-Tijuana 230 kV line will not exceed FAA height limitations. In accordance with PP-68 permit conditions, the towers will have red lights installed on the tops.

Noise. Operational phase noise from the interconnection project is expected to be minimal. Operational noise from the plant switchyard will be insignificant and will be masked by noise from the adjacent power plant. The noise levels from the power plant, including the plant switchyard, were modeled and compared to applicable USEPA, USOSHA, CalOSHA, and San Diego County guidelines and standards (OMGC, 2000). No significant noise impacts are anticipated for operation of the combined power plant and switchyard. Operation of the short interconnection line and the reconnected line are not expected to cause any significant noise impacts. Corona noise levels are expected to be negligible (refer to Section 4.2.2.1). Operation and maintenance activities along the portion of the Miguel-Tijuana line to be

reconducted are expected to be similar to the activities currently performed by SDG&E along the corridor.

In summary, no significant noise impacts are expected to result from implementation of the proposed project.

4.2.2.7 Materials and Waste Management for Power Plant

Hazardous materials used and stored at the OMGP site include aqueous ammonia, sulfuric acid, hydrochloric acid, and cyclohexylamine. All but aqueous ammonia will be used in quantities below thresholds listed under the California Accidental Release Prevention (CalARP) Program. Impacts from the accidental release of ammonia were evaluated through an Off-Site Consequences Analysis (OCA) using a worst-case accident scenario involving truck unloading. Air modeling showed that a threshold level of concern of 75 ppm would be confined almost entirely to the site and that no public sectors would be impacted at this level.

Other materials of concern used at the plant include hydrogen used to cool combustion turbines, and natural gas, the plant fuel. As a condition of plant certification by the CEC, the plant must prepare a Safety Management Plan for the delivery, storage, and handling of hydrogen, which includes measures for avoiding storage in areas that could be affected by turbine over-speed accidents or seismic events.

Natural gas, while not stored on site, poses fire and explosion concerns. The CEC Decision on certification of the plant concluded that such risks would be reduced to insignificance through the adherence to all applicable fire and safety codes and through the implementation of effective safety management practices. Conditions of certification ensure that construction and operation of gas pipelines complies with applicable safety requirements.

Wastes generated during construction would be primarily solid, non-hazardous wastes, including paper, wood, glass, plastic, and scrap metal. These wastes will be recycled, if possible, or disposed in a Class III (non-hazardous waste) landfill. Hazardous wastes generated during construction will include oil and grease, paint, batteries, solvents, welding materials, and cleaning agents. Hazardous wastes will be recycled if possible, with the remainder to be removed by a certified waste handler for disposal at a licensed Class I (hazardous) waste treatment or disposal facility.

Non-hazardous wastes generated during plant operation, including trash, office wastes, empty containers, packaging materials, and used filters will be disposed at a Class III facility, most likely Otay landfill. Hazardous wastes generated during operation, including spent air pollution control catalysts, used oils and filters, used cleaning solvents, and hydraulic fluids, if not recycled, will be taken by a certified waste hauler to a Class I landfill.

The materials and waste management practices to be implemented at the plant and the Conditions of Certification ensure the safe use and handling of materials and management of wastes and reduce potential impacts to the environment and public to levels below concern.

4.2.2.8 Technical Areas Not Impacted by Power Plant Operations

Operation of the power plant is not expected to impact cultural resources, paleontological resources, recreation, or land use in the project vicinity. The use of dry cooling towers would eliminate potential cooling tower plumes from mechanical draft cooling towers that potentially could have visual impacts.

4.3 CUMULATIVE IMPACTS

The AFC prepared for the Otay Mesa Generating Project (99-AFC-5) (Section 5.18-Cumulative Impacts) identified various planned projects in the project vicinity. Figure 4.3-1 (Location of Projects Considered in the Cumulative Impacts Assessment) illustrates the general geographical locations of these projects.

4.3.1 East Otay Mesa Specific Plan

The East Otay Mesa Specific Plan sets forth a comprehensive and long range vision for the development of approximately 3,300 acres within the East Otay Mesa Specific Plan area as a modern industrial and business center. Over the next 20 years, the Otay Mesa area (including the East Otay Mesa Specific Plan area) is anticipated to become an international industrial and business district, with over 6,700 acres of industrial and commercial planned land use. The Specific Plan sets the framework for future development, including policies, standards and guidelines that guide and facilitate private development over time. The Specific Plan further establishes an implementation program, including infrastructure and public facility plans, and a phasing and financing strategy.

Although not a project, the East Otay Mesa Specific Plan will substantially alter the current land use of the area and will result in significant environmental impacts as indicated in the EIR for the Plan (County of San Diego, 1994). Significant and mitigable impacts identified in the EIR include land use, landform alteration/visual quality, cultural resources, geology and soils, hydrology and water quality, traffic and transportation, air quality, health and safety, and public services and utilities. Impacts to biological resources have been determined to be significant and not mitigable in the EIR. At this early stage in the development of the area, it is not possible to predict the time when, or the specific location where, these impacts may occur. The proposed interconnection project will be a small component of the overall development of the area and is not anticipated to result in direct, unmitigable significant impacts. Therefore, the interconnection project will contribute to the cumulative impacts

within the Specific Plan area but is not considered to be a significant contributor to the overall level of cumulative impacts.

4.3.2 Otay Ranch

The Otay Ranch Project comprises the development of about 50,700 residences and other uses forming an approximately 23,100 acre new town, located about 3.5 miles east of downtown Chula Vista in the southwestern portion of the County. The “New Town Plan” proposes a mix of residential neighborhoods utilizing a village concept, commercial centers, research oriented industrial uses, a civic center, art centers, resort facilities, recreational parks, a town center, and a university site. Natural open space would be conveyed into a permanent reserve. The New Town Plan would be developed in phases over a 30-50 year period and result in a total population of about 150,000 persons.

Environmental review for the project consisted of the preparation of an EIR, completed in 1992. Critical issues identified during environmental review of the project were land use and planning, landform alteration/aesthetics, biology, cultural resources, geology and soils, paleontology, agricultural resources, mineral resources, water resources and quality, transportation and circulation, air quality, noise, public services and utilities, and risk of upset. Significant environmental impacts of the project were mitigated to below a level of significance for geology and soils, paleontology, mineral resources, water resources and quality, public services and utilities, and risk of upset. For the other environmental disciplines listed above, the EIR determined that selected impacts were unmitigable or would remain significant after mitigation (URS Greiner Woodward Clyde, 1999).

Development is planned to occur in stages. Areas not under active development will remain vacant and in an unimproved condition. The Otay Ranch is in the cumulative impact study area; although the existing 230 kV transmission line traverses the Otay Ranch area, the proposed project-related modifications to the transmission line will not result in substantial new ground disturbance and are expected to be similar to routine maintenance activities for the existing line. Additionally, project-related disturbances will avoid areas of critical biological habitat. Therefore, no significant cumulative impacts are anticipated as a result of the proposed interconnection project.

4.3.3 State Route 125

An extension of State Route 125 is planned to connect the Otay Mesa Port of Entry with the regional and inter-regional highway network in San Diego. The new highway segment will be approximately 11.2 miles long and will run from Otay Mesa Road to State Route 54. The right of way will be wide enough to accommodate up to 8 regular highway lanes and two high occupancy vehicle lanes (HOV) or fixed guideway transit. Interchanges will be at Otay Mesa Road, future Long Star Road, three proposed future interchanges in Otay Ranch, future

Olympic Parkway, Otay Lakes Road, East H Street, future Mt. Miguel Road, and State Route 54. The estimated future use of the highway after development of Otay Ranch and other projects in the Otay Mesa area is 200,000 vehicles per day.

The State Route 125 project was approved for study in June 1988 by Caltrans headquarters. Construction is slated to begin in 2000, and an initial 4-lane highway from State Route 54 to Otay Mesa Road is expected to be completed by 2002. The project is under development by a public/private partnership between Caltrans, San Diego Association of Governments (SANDAG), and a private California corporation, California Transportation Ventures, Incorporated (SANDAG, 1999; Caltrans, 1997; Tahlke, 1999).

The proposed Otay Mesa switchyard, power plant and the existing 230 kV transmission line are located east of the State Route 125 area. The proposed SR125 route crosses the existing 230 kV Miguel-Tijuana line near the Eastlake Residential Area and again near the San Miguel Ranch South Parcel (see Figure 4.3-1). Additionally, proposed SR125 comes very close to the existing Miguel Substation. The construction sequence (e.g. north to south versus south to north) will not be determined until a contractor is selected. There may be some overlap during construction of the Otay Mesa switchyard, reconductoring of the Miguel-Tijuana line, and State Route 125. During construction, cumulative traffic, air quality, and noise impacts may occur. However, these potential impacts would be reduced via implementation of Applicant-committed mitigation measures for the interconnection project and coordination during construction of the two projects. Therefore, no significant cumulative impacts are anticipated due to the proposed interconnection project.

4.3.4 Route 905 Upgrade

An upgrade is planned for Otay Mesa Road/Route 905 in the Otay Mesa area. The project will extend Route 905 to the east, just south of Otay Mesa Road, from I-805 to the Otay Mesa Port of Entry, a distance of 6.3 miles and approximate total area of 310 acres. The new Route 905 will be a six-lane freeway/tollway, with space in the median for future expansion to an eight-lane facility. Route 905 will eventually become an interstate route. Construction of the project is expected to require or directly result in the relocation of existing local roadways and facilities. Otay Mesa Road will be widened from the State Route 125 corridor to Sanyo Road, and Sanyo Road will be widened to two lanes from Otay Mesa Road to the point at which it is currently two lanes. An overcrossing at Airway Road and an undercrossing at La Media Road will be constructed to accommodate local roads. A multilevel interchange is planned with State Route 125, with provisions for future expansion of Route 905 to the east. The project is currently in the preliminary environmental planning stage. A draft EIS is expected to be issued in 2000 (Hicks, 1999).

The proposed interconnection project lies east of the area where Route 905 and State Route 125 will intersect. The proposed inter connection project is expected to be substantially

completed before construction of the Route 905 improvement and interchange with State Route 125 begins. No significant cumulative impacts are anticipated due to the interconnection project. Other planned projects on Otay Mesa (including the Otay Mesa Generating Plant) have the potential to contribute to traffic congestion at the intersection of SR-905/Otay Mesa Road, especially during the p.m. commute. In June, 2000, OMGC, LLC proposed additional traffic management measures to avoid contributing to significant traffic congestion impacts at the subject intersection. The proposed interconnection project has a small workforce for a 3-4 month timeframe. With implementation of the traffic mitigation, no significant project specific or cumulative effects are anticipated. The Applicant and OMGC, LLC will coordinate with the City of San Diego and Caltrans regarding the final timing of the two projects and associated construction activities in order to minimize any potential conflicts.

4.3.5 Conservation Plans

The Multiple Species Conservation Program (MSCP) has been developed to assemble and manage a preserve for conservation of biological resources throughout San Diego County. A Master EIR has been prepared for the MSCP by the City of San Diego and the U.S. Fish and Wildlife Service. The preserve will be created from connected parcels of land in the Plan's Multiple Habitat Planning Area (MHPA). The goals of the MHPA are to preserve core biological areas and linkages and maximize inclusion of public lands. The City of Chula Vista and the Otay Water District have adopted Subarea Plans based on the MSCP Plan for the MHPA. In addition, the Bureau of Land Management and the U.S. Fish and Wildlife Service are participating in the MHPA development in San Diego County and each have study areas in Chula Vista and Otay Mesa (City of San Diego and U.S. Fish and Wildlife Service, 1996). In general, these are study areas and management plans, and construction is not anticipated for these areas. The MSCP has the potential to affect land use and to protect biological resources in San Diego County. No significant cumulative impacts are anticipated.

4.3.5.1 Otay Valley Regional Park

The Otay Valley Regional Park project area is part of the City of Chula Vista's Subarea Plan within the MSCP. The park area is located in the Otay River Valley watershed from Otay Lakes to the Pacific Ocean (see Figure 4.3-1). The park will be one of the major open space areas in the Multiple Habitat Planning Area, linking south San Diego Bay and Lower Otay Lake. Recreational facilities will include a nature interpretive center, wetland areas, regional trails, and other open space uses. A Draft Concept Plan has been prepared for Otay Valley Regional Park, which is being coordinated through a Joint Exercise of Powers agreement between the County of San Diego, City of San Diego, and City of Chula Vista (URS Greiner Woodward Clyde, 1999).

The existing 230 kV transmission line crosses the east side of the park area and/or trails associated with the park. The 230 kV transmission line is already in place and potential modifications to the line will not result in substantial new ground disturbance and will avoid critical biological habitat. No significant cumulative impacts associated with the Otay Valley Regional Park are anticipated as a result of construction and operation of the interconnection project, including potential modifications to the existing 230 kV transmission line. Any areas disturbed (e.g., pull site locations, tower bases) will be restored following construction activities, thereby limiting potential cumulative effects on resources within the park.

4.3.5.2 Otay Mountain/Kuchamma Cooperative Management Area

The Otay Mountain/ Kuchamma Cooperative Management Area has been designated by the Bureau of Land Management as an acquisition project area under the MSCP. The area includes Otay Mountain and extends south to the border and east as far as Route 94 in Campo (see Figure 4.3-1). The Bureau of Land Management aims to establish an open space and wildlife area by acquiring privately owned holdings and consolidating public land ownership in this area. The land acquisition will be accomplished through exchanges of other Bureau of Land Management lands and with funds appropriated through the Land and Water Conservation Fund Act (City of San Diego and USFWS, 1996). The Otay Mountain/Kuchamma Cooperative Management Area is addressed in the Master EIR for the City of San Diego's MSCP, completed in January 1997.

The Otay Mountain/Kuchamma Cooperative Management area lies to the east of the power plant area and transmission lines. Because the Otay Mesa Generating Project power plant and transmission lines are not contained in the Otay Mountain/Kuchamma Cooperative Management Area, and because no construction is planned for the Otay Mountain/Kuchamma Cooperative Management Area by the BLM, no significant cumulative impacts are anticipated.

4.3.5.3 San Diego National Wildlife Refuge/Otay-Sweetwater Planning Area

The Otay-Sweetwater Planning Area is an area of Chula Vista that is included in a study initiated by the U.S. Fish and Wildlife Service to expand the San Diego National Wildlife Refuge under the MSCP. The Otay-Sweetwater Planning area is adjacent to the Otay Valley Regional Park project area and the Otay Mountain/Kuchamma Cooperative Management Area, and includes up to 48,000 acres from Otay Mesa north and east to the upper Sweetwater River (see Figure 4.3-1). The land is currently being used by the County of San Diego, Caltrans, and SANDAG as a mitigation bank. Newly acquired lands in these areas will be added to the existing San Diego Wildlife Refuge (City of San Diego and USFWS, 1996). The study is addressed in the Master EIR for the City of San Diego's MSCP, completed January 1997.

The existing 230 kV transmission line traverses the western part of the Otay-Sweetwater Planning Area. However, because the line is already in place and the potential modifications to the line are not expected to result in substantial new ground disturbance, no significant cumulative effects are anticipated as a result of the interconnection project.

4.3.6 Brown Field Airport Master Plan

The Brown Field Airport Master Plan is being prepared for the conceptual development of the airport for the next 20 years. The Plan considers alternative development options including a maximum eastern runway extension. This extension would expand the existing runway from its current length of 8,000 feet to up to 11,500 feet. This maximum runway extension/airport expansion would include airport associated retail, commercial, industrial and air cargo improvements.

A Notice of Preparation of a Draft EIR/Environmental Assessment (EA) for the Brown Field Airport Master Plan was issued on November 3, 1997. The study area analyzed in the Draft EIR/EA includes the current limits of Brown Field, the current airport property (17.7 acres) on southeastern corner of the intersection of Heritage and Otay Mesa Roads, and a potential eastern expansion area (235 acres) that would expand the airport from its current eastern boundary at La Media Road to the adopted alignment of SR 125 to the east. The Draft EIR/EA for this project was issued in July, 1999.

Otay Mesa Generating Company, LLC has coordinated with the Federal Aviation Administration to ensure the project's compliance with FAA regulations relative to Brown Field Airport and aviation safety. The FAA has determined (May 2000) that the project would not obstruct navigable airspace. No significant cumulative impacts are anticipated.

4.3.7 San Miguel Ranch

The San Miguel Ranch Project was a proposed 2,590-acre master planned residential community. It was composed of two parcels (North Parcel and South Parcel) of land separated by an easement of land owned by SDG&E, which operates the Miguel substation and transformer yard on the intervening land and which contains associated transmission lines. Mother Miguel Estates is also located between the North and South parcels of the San Miguel Ranch project (see Figure 4.3-1). The North Parcel is 1,852 acres, and the South Parcel is 738 acres. The land is currently in the unincorporated area of San Diego County, northeast of Chula Vista, but within the adopted sphere of influence of the City of Chula Vista. The original San Miguel Ranch General Development Plan (GDP), Final EIR, and Supplement to Final EIR were approved in March 1993. The project has since been redesigned and annexed to the City of Chula Vista. The North Parcel was sold to the federal government and the South Parcel is owned by Tri Mark Pacific Homes. Tri Mark is preparing a draft Sectional Planning Area (SPA) and subsequent EIR. The development will consist of

varying residential densities (low, low-medium, medium, and high), and several community facilities including an elementary school, community service facility, retail commercial center, and community and neighborhood parks. The development will also retain areas of natural open space. Construction is scheduled to begin in 2000 (Batchelder, 1999). The City of Chula Vista anticipates potential cumulative impacts as a result of the proposed project and surrounding development in land use, landform/visual quality, biological resources, transportation, air quality, noise, and public services and utilities. No cumulative impacts are expected to occur in the issue areas of parks, recreation, and open space (City of Chula Vista, 1996).

The existing 230 kV transmission line passes through the South Parcel of the San Miguel Ranch Project area. However, impacts from the potential modifications to the transmission line are not significant relative to the effects of the development of San Miguel Ranch. Although some cumulative impacts are anticipated within the San Miguel Ranch project itself, the proposed interconnection project is not expected to contribute substantially to these impacts. The Applicant committed mitigation measures proposed in this EA will limit the project's contribution to cumulative impacts to acceptable levels for all disciplines.

4.3.8 Otay Mountain Wilderness Area

The Otay Mountain Wilderness area is an 18,500-acre tract located approximately 3 miles to the northeast of the plant switchyard site, near the Lower Otay reservoir. This area is expected to become a federally-designated wilderness area once the Otay Mountain Wilderness bill (HR 15) is passed by the U.S. Senate (bill passed the House of Representatives on April 12, 1999). This area is being designated wilderness due to its pristine location, diversity of habitat, and role in San Diego's MSCP. The property is managed by the California Desert District of the BLM. This wilderness designation is not Class I for the purposes of the Clean Air Act. No significant adverse environmental impacts are anticipated from the interconnection project.

4.3.9 Conclusion

The portion of San Diego County where the proposed interconnection project is located is expected to grow significantly over the next 50 years. This includes the buildout of the East Otay Mesa Specific Plan area and the Otay Ranch development. Cumulative impacts from these projects alone were considered significant in their respective EIRs. Therefore, even without the proposed project, significant cumulative environmental impacts are anticipated to occur. The proposed project is a small contributor to these impacts when compared to the other projects in the area and will incrementally contribute to the cumulative impacts. The Applicant-committed environmental protection measures proposed in this EA will limit the project's contribution to cumulative impacts to acceptable levels for all disciplines.

4.4 SUMMARY

The proposed electrical interconnection of the Otay Mesa Generating Project to the SDG&E grid, including switchyard, short (0.1 mile) interconnection, and reconductoring of the existing Miguel-Tijuana 230 kV line, would require relatively minor construction activities and modifications to the existing Miguel-Tijuana line. The switchyard is located on the northeast portion of the Otay Mesa Generating Plant parcel and has been designed to conform to the design guidelines (site/grading plan, landscaping, etc.) specified in the County of San Diego's East Otay Mesa Specific Plan. The County of San Diego Board of Supervisors unanimously approved the OMGP on April 12, 2000. Otay Mesa Generating Company, LLC has committed to fully mitigating OMGP project impacts including biology, cultural resources, soils/water resources, and land use.

The short (0.1 mile) interconnection between the switchyard and the existing Miguel-Tijuana line has been designed to span the intervening terrain, thereby avoiding on-the-ground impacts. The two steel lattice towers to be added at the tie-in point on the Miguel-Tijuana line will appear similar to the existing SDG&E 230 kV towers along the existing line. Views of the new towers from Alta Road will be screened from view by the intervening Otay Mesa Generating Plant.

Reconductoring of the existing Miguel-Tijuana 230 kV transmission line will involve use of existing access roads that SDG&E maintains. The reconductoring will also involve use of existing towers which will readily accept the bundled conductors.

With implementation of the Applicant-committed environmental protection measures presented in Section 2.2.3, no significant impacts are expected to result from construction and operation of the proposed interconnection project and power plant. The interconnection project will result in minor incremental additions to cumulative impacts considering other projects currently identified in the project region. The proposed interconnection project is not expected to cause any significant cumulative impacts.

The proposed project will not result in: unavoidable adverse significant effects, irreversible or irretrievable commitments of resources, short-term benefits at the expense of long-term environmental degradation, or conflict with the intent of any Executive Orders relative to NEPA compliance.

The benefits of the proposed interconnection project are substantial. The project, if approved and built, will substantially reduce the critical future energy shortage projected by the Cal ISO for the San Diego region.

Figure 4.3-1
Location of Projects Considered in the Cumulative Impacts Assessment
(Landscape)